

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>DTP.P51182W0</b>	<b>FOR FURTHER ACTION</b> <small>see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.</small>	
International application No. <b>PCT/GB 01/01966</b>	International filing date (day/month/year) <b>04/05/2001</b>	(Earliest) Priority Date (day/month/year) <b>05/05/2000</b>
Applicant  <b>WEATHERFORD/LAMB, INC. et al.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the **language**, the International search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

**4. With regard to the title,**

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

**5. With regard to the abstract,**

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

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☐ None of the figures.

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 E21B29/06 E21B7/20 E21B43/10 E21B41/00 E21B7/06

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 E21B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, TULSA

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 887 655 A (BLIZZARD JR WILLIAM A ET AL) 30 March 1999 (1999-03-30) abstract	15,28
X	WO 98 09053 A (BAKER HUGHES INC) 5 March 1998 (1998-03-05) page 3, line 10-19; claims 1,3; figures 1-4 page 5, line 17 -page 6, line 9	25,26
A	WO 99 50528 A (LUCAS BRIAN RONALD ;WEATHERFORD LAMB (US)) 7 October 1999 (1999-10-07) figure 16	1,15,25, 27,28, 30,32,34
A	GB 2 335 217 A (SMITH INTERNATIONAL) 15 September 1999 (1999-09-15) abstract; figures 1,2	15,28



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

## \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*G\* document member of the same patent family

Date of the actual completion of the international search

6 September 2001

Date of mailing of the international search report

18/09/2001

Name and mailing address of the ISA

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 957 225 A (SINOR LAWRENCE ALLEN) 28 September 1999 (1999-09-28) abstract; figures 6-10 -----	1
A	HAHN, D. ET AL.: "Simultaneous Drill and Case Technology-Case History, Status and Options for Further Development" SPE 59126, 23 February 2000 (2000-02-23), XP002176833 figures 6-8 -----	1
P,A	EP 1 006 260 A (BAKER HUGHES INC) 7 June 2000 (2000-06-07) abstract -----	1

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-14,27,30-34

using a liner together with a mill/drill to drill a lateral wellbore

2. Claims: 15-24,28,29

drilling with a rotary steerable system coupled to a mill/drill

3. Claims: 25,26

sealing a liner in a lateral wellbore

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/GB 01/01966

## Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5887655	A	30-03-1999	US 5806595 A 15-09-1998
			US 5787978 A 04-08-1998
			US 5620051 A 15-04-1997
			US 5522461 A 04-06-1996
			US 5720349 A 24-02-1998
			US 5429187 A 04-07-1995
			US 5425417 A 20-06-1995
			US 5409060 A 25-04-1995
			US 5452759 A 26-09-1995
			AU 730926 B2 22-03-2001
			AU 5771398 A 25-08-1998
			AU 730521 B2 08-03-2001
			AU 5771498 A 25-08-1998
			EP 0960260 A1 01-12-1999
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			US 5836387 A 17-11-1998
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			US 6202752 B1 20-03-2001
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			AU 5059498 A 10-06-1998
			EP 0948700 A2 13-10-1999
			WO 9822689 A2 28-05-1998
			NO 991647 A 07-07-1999
			US 6056056 A 02-05-2000
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			AU 697125 B2 24-09-1998
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			WO 9630623 A1 03-10-1996
			NO 974286 A 06-11-1997
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			AU 7309696 A 30-04-1997
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			EP 0888490 A2 07-01-1999
			WO 97139 A2
WO 9809053	A	05-03-1998	AU 4330397 A 19-03-1998
			WO 9809053 A2 05-03-1998
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			US 6202752 B1 20-03-2001
			AU 3162299 A 18-10-1999
			EP 1068425 A1 17-01-2001
			WO 9950528 A1 07-10-1999
			NO 20004535 A 15-11-2000

Information on patent family members

International Application No

PCT/GB 01/01966

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
GB 2335217	A	15-09-1999	NONE	
US 5957225	A	28-09-1999	NONE	
EP 1006260	A	07-06-2000	US 6196336 B1 EP 1006260 A2 NO 995947 A	06-03-2001 07-06-2000 05-06-2000